

I. IN THE CLAIMS

1. (Canceled)

2. (Previously Presented) The slurry of claim 14, wherein the chelating particle comprises a metal oxide abrasive, iron oxide, a doped metal oxide, a metal nitride particle, a metal oxynitride particle, a metallic particle, a metal alloy particle, an organometallic particle, a polymer particle, a buckeyball, a buckeybowl, a carbon nanotube, a carbon black particle, activated carbon, a charcoal particle, a diamond particle, montmorillonite, an inorganically- and/or organically- modified clay, or a combination thereof.

3. (Previously Presented) The slurry of claim 14, wherein the chelating particle has a net negative zeta potential before attachment.

4. (Previously Presented) The slurry of claim 3, wherein the net negative zeta potential remains negative even after attachment of the plurality of chelator compounds.

5. (Previously Presented) The slurry of claim 14, wherein the chelating particle has an average particle size from about 1 nm to about 4000 nm.

6. (Previously Presented) The slurry of claim 14, wherein the plurality of chelator compounds attached to the chelating particle possess functional groups comprising hydroxyls, carboxylic acids, amines, amides, imines, imides, mercaptans, sulfonic acids, hydroxamic acids, carbonyl groups, esters, ethers, ureas, cyano groups, nitro groups, phosphonic acids, phosphonates, carbonates, inorganic salts thereof, or a combination thereof, and wherein at least a portion of the functional groups are no further than about 7 Å from another functional group.

7. (Previously Presented) The slurry of claim 14, wherein each chelator compound, before being attached to the chelating particle, possesses at least three functional groups

comprising hydroxyls, carboxylic acids, amines, amides, imines, imides, mercaptans, sulfonic acids, hydroxamic acids, carbonyl groups, esters, ethers, ureas, cyano groups, nitro groups, phosphonic acids, phosphonates, carbonates, inorganic salts thereof, or a combinations thereof.

8. (Withdrawn) The slurry of claim 14, wherein the plurality of chelator compounds comprises one or more of the following oligomeric and/or (co)polymeric chelators: poly(styrene sulfonic acid), poly(vinyl sulfonic acid), poly(acrylic acid), poly(methacrylic acid), a poly(acrylate), a poly(methacrylate), a poly(alkacrylate), poly(maleic acid), poly(vinyl acetate), poly(vinyl alcohol), poly(acrylamide), poly(cyanoacrylate), a cellulosic material, or a mixture or copolymer thereof.

9. (Previously Presented) The slurry of claim 14, wherein the plurality of chelator compounds does not comprise poly(styrene sulfonic acid), poly(vinyl sulfonic acid), poly(acrylic acid), poly(methacrylic acid), a poly(acrylate), a poly(methacrylate), a poly(alkacrylate), poly(maleic acid), poly(vinyl acetate), poly(vinyl alcohol), or a mixture or copolymer thereof.

10. (Previously Presented) The slurry of claim 14, wherein the chelator compounds are attached to the chelating particle via being attached to a spacer and the spacer being attached to the particle via being by a covalent chemical bond.

11. (Previously Presented) The slurry of claim 10, wherein said spacer comprises at least about 10 carbon atom linkages.

12. (Previously Presented) The slurry of claim 11, wherein the spacer is oligomeric or (co)polymeric and comprises a polysiloxane; a polyolefin; a polyacrylate; a polyalkacrylate; a polycarbonate; a perfluorinated polymer; a halogenated polymer; a polyimide; a polyimine; a conjugated (co)polymer; a polyketone; a polyether; a polyurethane; a polylactide; or a copolymer or combination thereof.

13. (Canceled)

14. (Currently Amended) A polishing, etching, and/or residue removing slurry comprising:

a polishing accelerator;

a diluent;

optionally an abrasive material; and

a plurality of chelating particles that are insoluble in the diluent, said chelating particles comprising a particle and a plurality of chelator compounds, wherein the ~~chelating~~ chelator compounds are attached to a spacer, said spacer being different than the chelating compounds and different than the chelator particle, and said spacer being disposed between the chelating particle and the ~~chelating~~ chelator compounds.

15. (Previously Presented) A chemical mechanical polishing slurry comprising:

an oxidizer;

a diluent;

optionally an abrasive material; and

a plurality of chelating particles that are insoluble in water and comprise: a particle body and a plurality of chelator molecules having a plurality of pendant functional groups attached thereto, said functional groups comprising hydroxyls, carboxylic acids, amines, amides, imines, imides, mercaptans, sulfonic acids, hydroxamic acids, carbonyl groups, esters, ethers, ureas, cyano groups, nitro groups, phosphonic acids, phosphonates, carbonates, inorganic salts thereof, or a combination thereof, wherein at least a portion of the functional groups are no further than about 7 Å from another functional group, and wherein at least a portion of the chelator molecules having a plurality of pendant functional groups attached thereto are attached to a spacer, said spacer being attached to the particle body, said spacer being different than the chelator molecules and different than the particle body, and said chelator molecules being attached to the spacer, and

wherein at least a portion of the pendant functional groups are present at the surface of the particle when the particle is present in a solution containing water.

16-21. (Canceled)

22. (Previously Presented) The slurry of claim 15, wherein the functional groups on the chelators attached to the particle comprise at least three sulfonic acid groups, and the spacer is attached to the particle by a covalent chemical bond.

23. (Previously Presented) The slurry of claim 15, wherein the chelators are attached the particle by a covalent chemical bond with the spacer.

24. (Currently Amended) A chemical mechanical polishing slurry comprising:
an oxidizer;
water; and
a plurality of chelating particles, each ~~chelator~~ chelating particle comprising: a particle body comprising a metal oxide, a plurality of spacer molecules each attached by a covalent bond to said particle body, and a chelator compound attached by a covalent bond to said spacer molecule, wherein the spacer molecule is not the chelator compound.

25. (Previously Presented) The slurry of claim 24, wherein the chelating particles have an average particle size between about 10 nanometers to about 450 nanometers.

26. (Previously Presented) The slurry of claim 25, wherein the chelator compound comprises at least one of ethylenediaminetetraacetic acid, ethylenediamine, oxalic acid, lactic acid, citric acid, and gallic acid.

27. (Previously Presented) The slurry of claim 25, wherein the slurry further comprises a plurality of abrasive particles.

28. (Previously Presented) The slurry of claim 27, wherein the plurality of chelating particles have an average size and the plurality of abrasive particle have an average size, wherein the average size of the chelator particles is from about 50% to about 200% of the average size of the abrasive particles.